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**TITLE: Achieving good surface stress distribution in hard metal prod. -
by
burnishing surface using tool with hard spheroidal tip**

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PATENT-FAMILY:

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ABSTRACTED-PUB-NO: ZA 8103064A

**BASIC-ABSTRACT: A favourable surface stress distribution is produced
in a
hardmetal article by burnishing the surface of the article under
pressure to
deform the surface zone of the article. The burnishing tool has a
spheroidal
tip of material, pref. diamond or a natural or synthetic diamond or
cubic boron
nitride compact, which is at least as hard as the hardmetal of which
the
article is made.**

The article and the burnishing tool are moved relative to each other so

that

the article surface is deformed in parallel strips which are close to one another, pref. contiguous or overlapped. In an embodiment, a cobalt-cemented tungsten carbide roll is hot or cold burnished, while it is rotating, by means of a burnishing tool which forms overlapping helical grooves of up to 10 microns depth of deformation .

TITLE-TERMS:

**ACHIEVE SURFACE STRESS DISTRIBUTE HARD METAL PRODUCT
BURNISH SURFACE TOOL HARD
SPHERE TIP**

DERWENT-CLASS: M24 P61

CPI-CODES: M24-D01B; M29-B;